Claims

1. Wind power installation for generating electrical energy with at least two components (12, 14, 16, 18, 20, 22, 24, 28, 30) which respectively have sensors and/or actuators and comprise a control unit, each of the control units being connected to a data network (30) and exchanging with the control units of the other components, signals for the operating conditions of the components, detected sensor values and/or control signals for the other components.

2. Wind power installation according to claim 1, characterised in that each control unit of a component exclusively controls said component.

3. Wind power installation according to claim 2, characterised in that a drive train unit (12, 16, 18) and an electrical unit (20, 22, 24) are provided as components.

4. Wind power installation according to claim 3, characterised in that the drive train unit comprises one or more of the following units as independent units:

Braking unit (18), shaft unit (14), generator unit (20).

5. Wind power installation according to claim 4, characterised in that the drive train additionally comprises a gear box (16).

6. Wind power installation according to claim 3, characterised in that the electrical unit comprises one or more of the following units as independent units:

Grid connection unit (24), converter unit (22), transformer unit.

7. Wind power installation according to any one of claims 1 to 6, characterised in that a tower unit is provided as an additional component.

8. Wind power installation according to claim 7, characterised in that the tower unit has one or more of the following units as components:

as heating device, lifting device and access control device.

9. Wind power installation according to any one of claims 1 to 8, characterised in that an ether network (30) is provided as a data network.

10. Wind power installation according to any one of claims 1 to 8, characterised in that a fieldbus network is provided as a data network.